VACUUM CLEANER SWEEPER





Chengli Special purpose Automobile Co., Ltd



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The foreword

Thank you first for choosing to use the company's products!

In order to enable you to better understand and use the vacuum car, before using the car, please carefully read the instructions and follow the key points, correct and reasonable use and maintenance, so that it to maximize a clean environment for your work and life.

The car is a technology-intensive complex system, the key elements are using famous brand products, the operation and maintenance personnel must be strictly trained to operate and drive the vacuum suction car.

Correct use, regular inspection and adjustment, and timely replacement of vulnerable parts and vulnerable parts are necessary conditions to ensure the normal operation of the car, and can effectively extend its service life. Any incorrect use and maintenance may cause early damage to the components.

Please refer to the maintenance and maintenance of the chassis instructions for maintenance and maintenance. See the special use statement of sub-engine for the use of sub-engine. For the maintenance of chassis and sub-engine, please directly contact the service station specified on the warranty card.

This instruction manual is only for the driving, operation, repair and relevant management personnel of vacuum suction vehicles supplied by the Company to help understand the main structure, technical performance, use and maintenance of the vehicle, as well as the analysis and troubleshooting of general faults.Correct use and maintenance of the vacuum car, is an important guarantee to ensure the performance of the vacuum car, extend its service life, therefore, the user after receiving the vacuum car of the company, should first read the manual carefully, after thoroughly understand the manual can start and use the car, any violation of operating regulations or maintenance failure, is not our normal warranty scope, thank you for cooperation.

This specification only explains the upper part of the vacuum cleaner. If the structural diagram or description in the specification are inconsistent due to different user required models and different optional configuration, and the general basic operation and maintenance are similar. With reference to the structure, principle and maintenance of the car chassis and vacuum sub-engine, please refer to the car chassis operation manual and engine operation manual provided with the car.

We welcome valuable comments to this product and provide timely feedback to facilitate our improvement and improvement. The Company's vehicles and instructions reserve the right to improve at any time.

I. Quality assurance

Dear users:

Thank you for using our product, the vacuum warranty consists of three parts:

1. Chassis warranty shall be responsible for the local or nearby chassis special maintenance service station:

1, users shall take the first free maintenance at the local or nearby chassis special maintenance service station within 30 days from the date of purchase and the mileage within 5000Km (see the first free maintenance record table for maintenance items). Please refer to the chassis maintenance manual for detailed provisions. A copy of the purchase invoice and the chassis product warranty manual shall be provided for the first free maintenance.

The 2, new 2, car is within 12 months or 30,000 km from the date of purchase (time and km whichever is first arrival in both conditions).Under normal use conditions, any quality problems are guaranteed.

The 3, warranty regulations and details are provided in the Product Quality Assurance Manual.

II. The warranty of auxiliary engine (non-road engine) shall be handled by the local or nearest Jiangling special maintenance station:

1, first strong guarantee period: the end user will terminate the term within 1 month from the date of car purchase. The starting date is based on the whole vehicle sales invoice. Refer to the first free maintenance record sheet for the strong maintenance items.

2, quality guarantee period: Jiangling Company shall undertake the warranty within 12 months from the date of sale of the Jiangling non-road engine. The starting

date is the sale date of the engine, whichever is the purchase date recorded in the warranty manual.The specific quality guarantee period for various parts of the engine assembly shall be implemented in accordance with the Quality Guarantee Timeline for Jiangling Engine Parts.

See the 3, warranty manual for additional details.

III. The warranty for the upper part (vacuum suction part) is responsible by our company:

1, You use the vehicle under the condition of delivery and within 12 months due to manufacturing quality problems, we provide free warranty, and provide the cost price for repair beyond the warranty period.

2, warranty period and warranty items:

Seri al num ber	Na me	Quality warranty period
1	Install the homemade parts of the dust removal system	One year from the date of delivery
2	High pressure fan	One year from the date of delivery
3	Hydraulic parts (cylinder pump valve hose joint, etc.)	One year from the date of delivery
4	Electric control system and accessories	One year from the date of delivery
5	Intelligent gray clearing system	One year from the date of delivery

After-sales service hotline (24 hours): 13886881033

Land Address: No.9, New Industrial Base,

Zengdu District, Suizhou City, Hubei

Province Editor: 441300

Sales hotline: 0722-

3803333 Photo Text Fax:

0722-3247666

Net Address: www.hbhwal.com

II. Safety operating procedures

The vehicle shall not open when the 1, box is lifted.

During 2, non-vacuum operation or transfer, the suction cup must be lifted to avoid vacuum suction contact.

The normal operating speed of the 3, secondary engine is 1500 to 1500-1800R/MIN,. In order to reduce the wear of the clutch, the secondary engine is not allowed to stay between 950 and 1250r/min.

The vehicle must park smoothly and in parking brake. The safety bar must be supported when entering the bottom of the box. The vehicle can be repaired and maintained only after the box is reliably supported by the support rod.



5, It is strictly prohibited to operate the hydraulic system when the sub-engine operates at high speed to avoid causing hydraulic system failure.

6, water pump is not idling, otherwise the pump seal and inner coil will be damaged.

7, No high pressure water flow to flush the engine radiator and engine air filter intake to avoid damage to radiator fins or engine intake

When 8, may stop freezing in winter, it must discharge the cooling water from the cooling tank and the engine and fill the antifreeze.At the same time, the water tank, water pipe, water filter and water pump must be discharged clean to avoid



freezing.

Turn the main power switch on with the 9, sub-engine. The total power supply should be turned off after work closure, so as not to avoid battery power loss.

10, Always check to remove dust from each engine air filter element (preferably daily inspection).Clean the heavy dust environment before the next operation.

III. Structure of the vacuum cleaner vehicle system

Limit of the maximum operating speed of the 1, engine

The secondary engine is operated by the pulley and the belt, and the centrifugal clutch automatically drives the fan operation when the secondary engine speed reaches 1250-1800r/min.Best subengine speed shall be controlled at 1800r/m i n (with turbo increase engine best speed of 2000.00 r/mi n).It is not prohibited to run beyond the rotation speed for a long time.The engine should not be less than 1500r/min.

Tension of the 2, fan drive belt

The transmission belt of the fan is four 1500A belts, and its tension will directly affect the service life of the belt and the suction effect of the fan. Its tension can be achieved by adjusting the position of the tensioning wheel (see Fig.).



It is not prohibited to adjust the belt or contact the sub-engine operation to prevent rolling hands.

3, suction system

Suction system is an important system of vacuum vehicle, and the size of its partial adjustment size will directly affect the performance of vacuum vehicle. The suction consists of main wide and minor suction suction (see below).

To ensure the optimal suction effect, the ground clearance at the lower edge of the suction port is



important, usually requiring the size to be about 5-8mm.This size can be adjusted by adjusting the height of the support roller at the rear of the suction cup.With the support

The wear of the support roller, the size will also be reduced, to be adjusted in time.First loosen the fastening nuts of the supporting roller, and then adjust the adjusting wire on the upper part of the roller retaining seat to achieve the ground clearance at the lower edge of the suction port.Finally, tighten the spare caps and bolts everywhere.

4, sprinkler system

The vacuum cleaner sprinkler system consists of water tanks, water pumps, water filters, ball valves, pipes, and nozzles.

Because the vacuum suction car adopts pure suction operation mode and efficient filtration system without secondary dust and back blowing dust.Therefore, the vacuum cleaner sprinkler system is mainly the rear spray, used to reduce the road dust, improve the cleanliness of the air.

The rear spray is located below the rear bumper (see Fig.) and consists of ten nozzles.When the nozzle is replaced or installed, pay attention should be paid to the opening direction of the good nozzle head, requiring the water emitted from the left and right nozzles to fan-connect with each other and form one line.If the nozzle is blocked or not smooth, remove and dredge before mounting.



Note; during the water spraying system, observe the water tank, the pump must not have water idling.

5, hydraulic system

The hydraulic system consists of hydraulic pumps, hydraulic tank,

hydraulic cylinder, solenoid block set and connecting

pipe.Adjustment of the hydraulic system pre pressure of the hydraulic system pressure The force was 10 – 12 Mpa.The overflow pressure can be adjusted by adjusting the



overflow valve on the hydraulic valve set. The specific adjustment method for adjusting the overflow valve is; first release the lock nut on the overflow valve and rotate the valve core clockwise to increase the pressure; otherwise, reduce the system pressure. The stening nuts must be locked after adjustment.

6, airflow back system

The system consists of air pump, gas storage tank, pressure relay, pulse valve and safety valve.

The secondary engine drives the pumping pump after the belt, usually the storage tank system pressure is 0.8~1MPA.The pressure relay (after power on) automatically supplies the pulse valve when the reservoir pressure reaches 0.6MPA.When the gas tank pressure is lower than



The pressure relay automatically breaks off and stops supplying the pulse valve at 0.6MPA.

7, electric control and instrument system

The electric control and instrument system of the vacuum suction vehicle consists of two independent electric systems of the automobile chassis and the electric control system and the instrument system of the working device.

Refer to the car chassis service instructions for supporting car chassis electrical system.

The electric control and instrument system of the special working device consists of electric control box, sub-engine electrical components and solenoid valves.

Note; frequently check the line between each power supply for damage to the surface insulation rubber and whether the line is too close to the exhaust pipe.Excluding them immediately if found.

IV. Basic operation and use

Inspection and preparation of 1, before use

To ensure the normal work of the vacuum cleaner, the operators must conduct predriving inspection every day.

- a) Regularly check the oil surface height of each engine oil, do not start the engine in the case of insufficient or excessive oil;
- b) Check for an adequate fuel supply;

c) Check whether the hydraulic oil in the hydraulic tank is sufficient or

appropriate: when each cylinder is in the retracted state, the oil level in the tank

shall not be lower than 2 / 3 of the highest mark line; whether there is leakage and

blockage in the hydraulic system;

d) Ch eck reliable connection of

each structure; e) Check adequate

tire pressure.

2, electric control box operating panel understanding



1) Sub-engine tachometer (normal operating speed of sub-engine

is 1200-100-1800r/min,)

- 2) Oil alarm lamp (when the indicator light is on, stop for cooling and check.)
- 3) Charging indicator lamp

- 4) Water sprinkler system switch
- 5) Lighting lamp switch
- 6) Sub-engine ignition start switch
- 7) Dust removal switch
- 8) Left suction operating switch
- 9) Right suction operating switch

10) Water temperature meter (the water temperature of the subengine should not exceed 95 degrees during operation. If 95 degrees, stop for cooling.)

11) Work indicator lamp

12) Large box lift (the vehicle must park smoothly when the large box lift, in the parking brake state and the auxiliary engine maintains idle speed, no high-speed operation so as not to damage the hydraulic system.The safety frame must be raised when entering the bottom to ensure safe operation.)

13) Backdoor switch

14) Lift (please raise the suction cup if serious road damage is found or the vehicle is going to pass the speed belt and put it down after passing. If there is a large obstacle on the road, do not force through, so as not to break the suction cup.)

3, inspection before departure

1) Check whether the fastening of tire nuts, component fastener nuts and pin shaft is loose, whether the tire appearance and air pressure are normal; the suction nozzle roller is excessive wear, and the seals, back door and suction pipe seals at the large box and fan are damaged.

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2) Check the whole vehicle for oil leakage, water leakage and other phenomena.

3) Check the main and secondary engine fuel, cooling water, oil level, brake fluid, hydraulic oil level (replace the hydraulic oil every year, clean or replace the filter element before replacement), and shall be added if necessary.Fill the water with the clear water tank.

4) After starting the main engine, listen to its operation is normal, check the vehicle instrument, light, driving brake,

Is parking brake etc normal.

5) After starting the sub-engine, listen to its operation for abnormal vibration or noise, check the operating instrument and indicator lights, and check the tension of the fan transmission belt and hydraulic pump transmission belt.

6) After the inspection, each part is in the normal working state, the garbage bin is in the return position, the sucker is in the promotion state, each electric control switch is stopped, and the auxiliary engine is stalled.

4, job operation

(I) Vacuuming operation

- 1) Power on the control box and start the auxiliary machine. The idle heat engine takes 15 minutes at temperatures below 0 degrees.
- Beat the suction ker to the drop position.Open Left Work Work and Right Work.
- 3) Spray water to open the water spray switch.

4) After confirming that the suction cup contacts the ground, raise the subengine speed to within the operating speed range.Check whether the air pressure in the air tank (generally set to 0.6mpa) before starting the main engine vehicle, and reach the air pressure, blow the control knob in the control box to the "open" position.

5) Start the main engine vehicle at the appropriate speed and start vacuum operations (usually one idle speed can be adjusted according to the degree of road dirt).

(2) End of vacuuming

- 1) The vehicle stops driving.
- 2) Lower the sub-engine speed to the idle state.

- 3) Lift the suction and turn off left suction and right suction
- 4) Beat the backblow control knob in the control box to Off.

Turn off the sprinkler switch and turn off the secondary engine and control box.

(3) Discharge out of the garbage

1) Open the control box box and start the auxiliary engine to keep the engine at idle speed.

2) Point the rear door control knob in the control box to the Open position and hit the large box control knob to the Up position.Garbage dump.In order to facilitate the discharge of garbage, the car is equipped with the tail electric control operating system.The secondary engine is idle Garbage can be handled at the rear at speed.

3) After the garbage dump, point the "large box" control knob to the descending position and to the middle position after the box is fully returned.The rear door cannot be closed until the chassis is fully retracted.

5, operational considerations

1) Check whether the sucker is raised in place before driving. Pay attention to whether the sucker will fall during the long distance driving automatically

2) The handle should slowly accelerate or slow down when rotating the subengine throttle. The sub-engine should be preheated before winter operation, and the sub-engine can reach 55 degrees before the water temperature reaches above 55 degrees. Pay attention that the water temperature of the sub-engine should not exceed 92 degrees during operation. If the water temperature exceeds 92 degrees or the oil pressure indicator is on, pull over for cooling after checking.

3) During vacuuming operation, close attention should be observed to the road conditions to prevent the collision between the auxiliary suction and the road line. If there are large obstacles or garbage over 50MM in diameter, do not force through, so as not to break the suction cup. In the process of 4) suction, if the suction effect is poor, you should immediately pull over to check whether the suction is large

Block of garbage is blocked. When encountering the road surface with water, you should lift the suction plate or bypass the water road surface, so as not to absorb the water into the large box and get wet to the

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filter tube.

5) The garbage shall be removed in time after completing the vacuuming operation. The vehicle can be cleaned if conditions permit, and do not wet the box cartridge and the air filter inlet during the cleaning process.

6) In order to ensure the good permeability of the air duct filter tube, the filter tube should be blown back to clear the dust after the vacuum absorption operation every day.Beat the backblow control knob in the control box to Turn On.The usual time is 2~3 cycles, 2~3 times per filter cartridge.

7) The working environment of the vacuum cleaner car is relatively bad (large dust). In order to ensure the normal operation of the power parts for a long time, the main and auxiliary engine air filters must be removed for blow cleaning after the end of work every day.Otherwise, the resulting engine pull failure is not under the warranty.

6, new car inspection and run-in

In order to enable the vacuum cleaner to achieve the due performance index and extend its service life, the engine run-in must be carried out before the normal operation of the vacuum cleaner. The driver operator must carefully read this instruction manual and be familiar with the operating specifications and maintenance rules of the vacuum cleaner.

The lubricating oil used in the new car hydraulic system is usually L-HM46# hydraulic oil, which can be applicable to the ambient temperature in most areas. In a special high and low temperature working environment, the corresponding plate hydraulic oil should be replaced according to the actual ambient temperature.

Chassis maintenance and running-in must refer to the chassis use instructions, and conduct correct and reasonable running-in and maintenance according to the chassis requirements.

The running-in period of the special working device for the vacuum suction vehicle is one month.During the run-in period, each operation should not exceed 2 hours, and it can be separated by half an hour later.Avoid overspeed of subengine operation, rapid acceleration and deceleration.During the run-in period, observe all parts of the vacuum cleaner for abnormal vibration, noise, oil leakage and water leakage.Regularly check the fan drive belt and hydraulic pump belt for skid phenomenon and whether the instructions of each electric control button and each instrument are normal.

V. Precautions for vehicle use

The 1, sub-engine should not turn off the engine during the high-

speed rotation process, so as not to forget to adjust the sub-engine speed and cause the sub-engine transmission shaft to fracture or break the clutch plate during the restart of the sub-engine.

2, Regularly check the hydraulic oil temperature and oil level, and the hydraulic oil temperature display is on the oil level table. When the oil temperature exceeds 65 degrees, it is recommended to operate the cooler after half an hour or replace the hydraulic oil used in the high temperature environment. Add in time when the oil level is too low.

Before the 3, vacuum suction operation, check the air source, trachea and air storage tank before starting, so as not to cause the brake failure of the air brake chassis during the vacuum suction operation.

4, When opening the water spraying system, first check for water in the water tank. When the water spraying system cannot work properly, timely clean the water filter and dredge the foreign body in each sprinkler head.

The 5, lifting bar shall be supported at the bottom of the large box to support the box to be determined

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Maintenance or maintenance can be conducted after reliable support.

VI. Precautions for vehicle use

Electric control operating system for the rear end of the 1, carriage

The vehicle has a rear electric control operation system. The garbage can be unloaded at the rear when the secondary engine starts idle.

2, left and right infrared video monitoring system and reversing voice alarm system

In order to better ensure the safety of the vehicle when reversing and observe the vacuum suction road surface situation, the vehicle is equipped with a reversing radar monitoring system and a left and right infrared video monitoring system.The monitor LCD screen is mounted on the rear of the driver visor and is flipped down first to adjust to the best viewing angle

3, hand pressure pump emergency lifting system

The hand pressure pump emergency lift system can raise the bin body and suction cup when the secondary engine fails and cannot start the secondary engine.

Operation instructions of the manual pressure pump: turn on the power supply, one person operates the corresponding function switch on the control panel, and the other person presses the pressure pump to realize the corresponding functions.

VII. Daily maintenance and

maintenance of vehicles

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1, Day

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- Check whether the vehicle external fasteners are loose and whether the vehicle is damaged.
- Check the chassis by following the daily maintenance of the chassis use instructions.
- Check the secondary engine oil level.
- Check the water level of the sub-engine cooling water tank.
- Check the sub-engine for oil and water leakage.
- Check the hydraulic fuel tank oil level.
- Check the hydraulic system and the sprinkler system for no leakage.
- Check the electrical control system and the display for normal conditions.
- Check the tire for damage and normal air pressure.
- Check the tension of the fan drive belt for damage.
- Check the engine filter element cleaning.
- Check the cleaning of filter in the large box.
- Check the cleaning water filter.
- Check the air source for air leakage and drain the air tank.

2, week maintenance

- The following maintenance is performed once a week on the basis of completed daily maintenance.
- Check the lubrication and add special high temperature grease to the butter nozzle on each moving part.
- Check the ground clearance of the suction disc plywood and the wear of the suction disc roller.

- Check the liquid level in the storage bottle.
- Check the wear of each rubber seal.
- Check the fan impeller for dirt and wear.
- Check the suction pipe for air leakage.

- Check the filter cartridge inside the box for damage.Remove the filter cartridge one by one to thoroughly clear the ash.
- Check the hydraulic oil for turbidity, white, black and other abnormalities.
- Check the exhaust outlet of cleaning fan.
- Check the pollution damage of each engine air element (depending on the damage).

VIII. General fault analysis and troubleshooting methods



The 2, troubleshooting table

Failed	Rea son	Excluded
	1) Oil pump fault	Repair or replace
The	2) Insufficient overflow valve pressure	Readjust the
hydraulic	3) The hydraulic oil is insufficient	overflow valve
system has	4) The hydraulic oil is for for too time	pressure to
no pressure		supplement the
or low		hydraulic oil
pressure		Replace hydraulic oil
Exception of	1) Parts are lacking in oil	Fill grease
motion parts	2) Connection parts are damaged	Repair or replace
	1) Oil leakage of pipe road	Maintenance pipe
Hydraulic cylinder	2) Change direction valve fault or	Clean or replace the
		reversing valve overhaul
	3) On cynnder fault	line for repair or
	. \ `	replacement
Hydraulic	1) Hydraulic oil road failure	Check or replace
operation of the control box	2) Control box and solenoid valve set	Change the electrical elements for the
The control button failed	line fault	maintenance line

The dust	1)	Each connecting coal strip is aged	Rep
		or damaged	lace
	2)	The lower shell of the fan is leaking	rep
	3)	Transmission belt over loose fan	air
absorption effect is	5	belt rotation	Adjust fan tensioner or
not good	4)	Vacuum suction port plywood is damaged or has a large ground	replace belt replacement
		clearance	or adjust ground
	5)	The fan speed is too low	clearance
	6)	The suction cup suction duct is	Increase the rotational speed of the
		blocked	auxiliary transmitter
	7)	The filter clip ash is severely	Remove the suction
		blocked	duct to extend the
		5	blow time
			Remove the filter cartridge to remove
	4		
	1)	Insufficient battery voltage	Charging
The secondary engine does not start	2)	Starter fault	Repair or
	3)	Connector or line contact fault	replaceme
)	nt and
	R		maintena
			nce

The secondary	1) The burning is not good	Check the engine for cylinder shortage
engine is smoking	2) Heat oil	Check for excessive pull cylinder pulling or oil filling
The secondary engine is not ineffective		Check the fuel tank for a lack of oil
	1) The oil supply is insufficient	Check that the subengine fuel pump works properly
		Replace diesel filter element
	2) Damage of throttle wiring	Check the throttle pull line for
		loosening Check the throttle pull line handle for damage
		Check the air road for leakage
Inverse air flow is abnormal	1) Air pressure is low or shown at zero	Check whether the pumping pump is abnormal
	2) The pulse valve does not work	Check that the voltage is normal
	 The reverse interval of the pulse valve is abnormal 	Check the pulse diaphragm for blockage
		Check or adjust the pulse controller procedures
The nozzle does not spray water	1) There is no water in the tank	Add water to the tank
	2) Water pump damage	Replace or overhaul the water pump
	3) Water pipe is stuck or cracked	Replace or overhaul the water pipes
	4) Control circuit problems	Repair or replace the line
	5) The nozzle is blocked	Remove the nozzle to remove the foreign bodies
	6) Water filter blocked	Clean water filter

Note: Technical parameters are constantly updated without notice.Do

not be liable for possible errors in the catalogue and other materials.(If there are questions or vehicle failure, please contact the manufacturer timely for troubleshooting)

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